

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/762,577B
Source: JFW16
Date Processed by STIC: 03/03/2006

ENTERED



IFW16

RAW SEQUENCE LISTING

DATE: 03/03/2006

PATENT APPLICATION: US/09/762,577B

TIME: 10:45:23

Input Set : A:\2486-109REPLACEMENTSEQLISTCOPY1.TXT

Output Set: N:\CRF4\03032006\I762577B.raw

4 <110> APPLICANT: Dranoff, Glenn
 5 Schmolinger, Jan
 6 Hodi, F. Stephen
 7 Mollick, Joseph
 10 <120> TITLE OF INVENTION: TUMOR ANTIGENS AND USES THEREOF
 13 <130> FILE REFERENCE: 2486/109
 15 <140> CURRENT APPLICATION NUMBER: US 09/762,577B
 16 <141> CURRENT FILING DATE: 2002-08-29
 18 <150> PRIOR APPLICATION NUMBER: 60/095,766
 19 <151> PRIOR FILING DATE: 1998-08-07
 21 <160> NUMBER OF SEQ ID NOS: 68
 23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 1433
 27 <212> TYPE: DNA
 28 <213> ORGANISM: homo sapiens
 30 <400> SEQUENCE: 1
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 32 ctgcgactcc acctgggagg aggacgagga ggatgcggag gacgcggagg acgaggactg 120
 33 cgaggacggc gaggccgcg ggcgcgaggga cgcggacgca gggacgagg acgaggagtc 180
 34 ggaggagccg cgggcggcgc ggcgcagctc gttccagtcc agaatgcacag ggtccagaaa 240
 35 ctggcgagcc acgaggagaca tgtgttagta tcggcacaac tatccggatc tggtgaaacg 300
 36 agactgcaat ggggacacgc caaacctgag tttctacaga aatgagatcc gcttcctgcc 360
 37 caacggctgt ttcatttggg acattttca gaactggacg gacaactatg accttcgttga 420
 38 ggacaatcac tcctacatcc agtggctgtt tcctctgcga gaaccaggag tgaactggca 480
 39 tgccaagccc ctcacgctca gggaggctcgaa ggtgttaaa agctcccagg agatccagga 540
 40 gcccgttgtc cgggcctactg agctcatgtc gggcttctac gggatccggc tggaggaccg 600
 41 aggacacgggc acgggtggcc gggcacagaa ctaccagaag cgcttccaga acctgaactg 660
 42 ggcgcagccac aacaacctcc gcatcacacg catcctcaag tcgctgggtg agctgggcct 720
 43 cgagcacttc caggcgccgc tggccgtctt cttccctggag gagacgctgg tgcggcggga 780
 44 gctggcgccggg gtgcggcaga gtgccttggaa ctacttcatg ttcggccgtgc gctggccgaca 840
 45 ccagcgccgc cagctggtc acttcgtctg ggagcaacttc cggcccccgt gcaagttcgt 900
 46 ctggggggccc caagacaagc tgcggaggtt caagcccagc tctctgcccc atccgctcg 960
 47 gggctccagg aagggtggagg aggaaggaag ccccggggac cccgaccacg aggccagcac 1020
 48 ccagggttcgg acctgtggc cagagcatag caagggtggg ggcagggtgg acgaggggcc 1080
 49 ccagccacgg agcgtggagc cccaggatgc gggacccctg gagaggagcc agggggatga 1140
 50 ggcaggggggc cacgggaaag ataggccgga gcccctaagc cccaaagaga gcaagaagag 1200
 51 gaagctggag ctgagccggc gggagcagcc gcccacagag ccaggccctc agagtgcctc 1260
 52 agaggtggag aagatgcctc tgaatttggaa ggggtgtgcc ctcagccagg gcagccctcag 1320
 53 gacggggacc caggaagtgg ggggtcagga ccctggggag gcagtgcac cctggccggca 1380
 54 acccctggga gccagggtgg ccgacaaggt gaggaaaccg gaggaaggtg gat 1433
 56 <210> SEQ ID NO: 2
 57 <211> LENGTH: 477

(P9-6)

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58 <212> TYPE: PRT
 59 <213> ORGANISM: homo sapiens
 61 <400> SEQUENCE: 2
 62 Ser Val Ser Leu Pro Pro Pro Ala Arg Ala Pro Pro Pro Pro Ser Met
 63 1 5 10 15
 64 Asp Asp Pro Asp Cys Asp Ser Thr Trp Glu Glu Asp Glu Glu Asp Ala
 65 20 25 30
 66 Glu Asp Ala Glu Asp Glu Asp Cys Glu Asp Gly Glu Ala Ala Gly Ala
 67 35 40 45
 68 Arg Asp Ala Asp Ala Gly Asp Glu Asp Glu Glu Ser Glu Glu Pro Arg
 69 50 55 60
 70 Ala Ala Arg Pro Ser Ser Phe Gln Ser Arg Met Thr Gly Ser Arg Asn
 71 65 70 75 80
 72 Trp Arg Ala Thr Arg Asp Met Cys Arg Tyr Arg His Asn Tyr Pro Asp
 73 85 90 95
 74 Leu Val Glu Arg Asp Cys Asn Gly Asp Thr Pro Asn Leu Ser Phe Tyr
 75 100 105 110
 76 Arg Asn Glu Ile Arg Phe Leu Pro Asn Gly Cys Phe Ile Glu Asp Ile
 77 115 120 125
 78 Leu Gln Asn Trp Thr Asp Asn Tyr Asp Leu Leu Glu Asp Asn His Ser
 79 130 135 140
 80 Tyr Ile Gln Trp Leu Phe Pro Leu Arg Glu Pro Gly Val Asn Trp His
 81 145 150 155 160
 82 Ala Lys Pro Leu Thr Leu Arg Glu Val Glu Val Phe Lys Ser Ser Gln
 83 165 170 175
 84 Glu Ile Gln Glu Arg Leu Val Arg Ala Tyr Glu Leu Met Leu Gly Phe
 85 180 185 190
 86 Tyr Gly Ile Arg Leu Glu Asp Arg Gly Thr Gly Thr Val Gly Arg Ala
 87 195 200 205
 88 Gln Asn Tyr Gln Lys Arg Phe Gln Asn Leu Asn Trp Arg Ser His Asn
 89 210 215 220
 90 Asn Leu Arg Ile Thr Arg Ile Leu Lys Ser Leu Gly Glu Leu Gly Leu
 91 225 230 235 240
 92 Glu His Phe Gln Ala Pro Leu Val Arg Phe Phe Leu Glu Glu Thr Leu
 93 245 250 255
 94 Val Arg Arg Glu Leu Pro Gly Val Arg Gln Ser Ala Leu Asp Tyr Phe
 95 260 265 270
 96 Met Phe Ala Val Arg Cys Arg His Gln Arg Arg Gln Leu Val His Phe
 97 275 280 285
 98 Ala Trp Glu His Phe Arg Pro Arg Cys Lys Phe Val Trp Gly Pro Gln
 99 290 295 300
 100 Asp Lys Leu Arg Arg Phe Lys Pro Ser Ser Leu Pro His Pro Leu Glu
 101 305 310 315 320
 102 Gly Ser Arg Lys Val Glu Glu Glu Gly Ser Pro Gly Asp Pro Asp His
 103 325 330 335
 104 Glu Ala Ser Thr Gln Gly Arg Thr Cys Gly Pro Glu His Ser Lys Gly
 105 340 345 350
 106 Gly Gly Arg Val Asp Glu Gly Pro Gln Pro Arg Ser Val Glu Pro Gln
 107 355 360 365

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108 Asp Ala Gly Pro Leu Glu Arg Ser Gln Gly Asp Glu Ala Gly Gly His
 109 370 375 380

110 Gly Glu Asp Arg Pro Glu Pro Leu Ser Pro Lys Glu Ser Lys Lys Arg
 111 385 390 395 400

112 Lys Leu Glu Leu Ser Arg Arg Glu Gln Pro Pro Thr Glu Pro Gly Pro
 113 405 410 415

114 Gln Ser Ala Ser Glu Val Glu Lys Ile Ala Leu Asn Leu Glu Gly Cys
 115 420 425 430

116 Ala Leu Ser Gln Gly Ser Leu Arg Thr Gly Thr Gln Glu Val Gly Gly
 117 435 440 445

118 Gln Asp Pro Gly Glu Ala Val Gln Pro Cys Arg Gln Pro Leu Gly Ala
 119 450 455 460

120 Arg Val Ala Asp Lys Val Arg Lys Pro Glu Glu Gly

121 465 470 475

124 <210> SEQ ID NO: 3

125 <211> LENGTH: 978

126 <212> TYPE: DNA

127 <213> ORGANISM: homo sapiens

129 <400> SEQUENCE: 3

130 cgcgggtggct agtggtggtg cccagacattt ggccttgc gggtcccctg ccccatcgaa 60

131 gcaccccaag gctggacaca gtgagaacgg ggttggaggag gacacagaag gtcaacggg 120

132 gccccaaagaaa ggtacccctg ggagcccatc ggagacccca ggcccccagcc cagcaggacc 180

133 tgcaggggac gagccagccg agagccatc ggagacccca ggcccccggcc cagcaggacc 240

134 tgcaggggac gagccggccg agagccatc ggagacccca ggcccccggcc cagcaggacc 300

135 tgcaggggac gagccagcca agacccatc ggagacccca ggcccccagcc cggcaggacc 360

136 tacaagggat gagccagccg agagccatc ggagacccca ggcccccggcc cggcaggacc 420

137 tgcaggggac gagccagccg agagccatc ggagacccca ggcccccggcc cggcaggacc 480

138 tgcaggggac gagccagccg agagccatc ggagacccca ggcccccagcc cggcaggacc 540

139 tacaagggat gagccagcca aggccggggga ggcagcagag ttgcaggacg cagaggtgga 600

140 gtcttctgca aagtctggta agccttaagg aaaggagtgc cctgtggcgt ctgggtctc 660

141 ctgtccctgc tgcaggggct ggggcctcg gagctgtgc gggctccct caggctctgc 720

142 ttctgtaccc gtgaccatg acccacatgt ctggctctt gtggggccac tatagcagcc 780

143 accagaagcc gcgaggccct cagggaaagcc caaggcctgc agaagccctc tggctggct 840

144 gtgtcttccc cacccagctc tccccctgcgc ccctgtctt gtaaattgac ccttctggag 900

145 tggggggcgg cggcaggccc tgctttctt agtctgtatgc caagcaaggc ctttctgaa 960

146 taaaattcatt tgactttg 978

148 <210> SEQ ID NO: 4

149 <211> LENGTH: 243

150 <212> TYPE: PRT

151 <213> ORGANISM: homo sapiens

153 <400> SEQUENCE: 4

154 Arg Trp Leu Val Val Val Pro Arg Pro Trp Pro Leu Pro Gly Pro Leu

155 1 5 10 15

156 Pro His Arg Gly Thr Pro Arg Leu Asp Thr Val Arg Thr Gly Leu Arg

157 20 25 30

158 Arg Thr Gln Lys Val Glu Arg Gly Pro Lys Lys Val Pro Leu Gly Ala

159 35 40 45

160 His Arg Arg Pro Gln Ala Pro Ala Gln Gln Asp Leu Gln Gly Thr Ser

161 50 55 60

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Input Set : A:\2486-109REPLACEMENTSEQLISTCOPY1.TXT

Output Set: N:\CRF4\03032006\I762577B.raw

162 Gln Pro Arg Ala His Arg Arg Pro Gln Ala Pro Ala Gln Gln Asp Leu
 163 65 70 75 80
 164 Gln Gly Thr Ser Arg Pro Arg Ala His Arg Arg Pro Gln Ala Pro Ala
 165 85 90 95
 166 Gln Gln Asp Leu Gln Gly Thr Ser Gln Pro Arg Pro His Arg Arg Pro
 167 100 105 110
 168 Gln Ala Pro Ala Arg Gln Asp Leu Gln Gly Met Ser Gln Pro Arg Ala
 169 115 120 125
 170 His Arg Arg Pro Gln Ala Pro Ala Arg Gln Asp Leu Gln Gly Thr Ser
 171 130 135 140
 172 Gln Pro Arg Ala His Arg Arg Pro Gln Ala Pro Ala Arg Gln Asp Leu
 173 145 150 155 160
 174 Gln Gly Thr Ser Gln Pro Arg Ala His Arg Arg Pro Gln Ala Pro Ala
 175 165 170 175
 176 Arg Gln Asp Leu Gln Gly Met Ser Gln Pro Arg Arg Gly Arg Gln Gln
 177 180 185 190
 178 Ser Cys Arg Thr Gln Arg Trp Ser Leu Leu Pro Ser Leu Gly Ser Leu
 179 195 200 205
 180 Lys Glu Arg Ser Ala Arg Arg Arg Leu Gly Pro Pro Val Pro Ala Ala
 181 210 215 220
 182 Gly Ala Gly Ala Ser Gly Ala Ala Ala Gly Ser Pro Gln Ala Leu Leu
 183 225 230 235 240
 184 Arg Asp Pro
 188 <210> SEQ ID NO: 5
 189 <211> LENGTH: 3400
 190 <212> TYPE: DNA
 191 <213> ORGANISM: homo sapiens
 193 <400> SEQUENCE: 5
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 195 aaagaaaacc agaaaacttga agcaaggcaga gatgaactcc agtccagaaa agttaaatta 120
 196 gactatgaag aagtgggtgc atgtcagaaa gaggtcttaa taacttgga taagaagttg 180
 197 ttaaactgca gagctaaaat cagatgtat atgaaagata ttcatactct tcttaaagaa 240
 198 ggagttccca aaagtgcacg aggagaaaatt tggcagttc tggcttaca gtaccgactc 300
 199 agacacagat tgcataataa acaacagcct cctgacatat cctataagga actttgaag 360
 200 cagctcaactg ctcagcagca tgcgattttt gtggatttag gaaggacgtt tcctactcac 420
 201 ccttactttt cagtacagct tggccagga cagctgtcac tggtaaacct cctgaaagcc 480
 202 tattcattct ttgctggaca aagaatggga tactgtcagg ggatcagtt tggctgttga 540
 203 gtcctgttcc tgcacatgag tgaagagcaa gcctttgaaa tgctgaaatt cctcatgtat 600
 204 gacctcggtc tccgcaagca gtacagacct gacatgtatgt cgctgcagat tcaaattgtac 660
 205 cagctgtcca ggctccttca tgactatcac agagatctct acaatcacct tgaagaaaat 720
 206 gaaatcagcc ccagtttca tgctgcccc tggttcctca cattgttgc ctctcagttt 780
 207 tcatttagat ttgttagccag agttttgtat attattttc ttcaaggaaac tgaagttata 840
 208 ttcaagggtt cactcagcct actgagcagc caagagacac ttataatggg aatgtgagag 900
 209 ctttggaaaat attgttgagt ttcttaaaaa cacgctacct gatatgaata cctctgaaat 960
 210 ggaaaaaaattt attaccagg ttttgagat ggatattct aagcagtgc atgcctatga 1020
 211 ggtggaaat catgtgctac aggtatgatct tcaggaatct tcataattcct gtgaggatag 1080
 212 tggaaactttg gagaagctgg agagggccaa tagccaactg aaaagacaaa acatggacct 1140
 213 cctagaaaaa ttacaggttag ctcataactaa aatccaggcc ttggaaatcaa acctggaaaa 1200
 214 tcttttgacg agagagacca aaatgaagtc tttaatccgg accctggaaac aagaaaaat 1260

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215 ggcttatcaa aagacagtgg agcaactccg gaagctgctg cccgcggatg ctctagtcaa 1320
 216 ttgtgacctg ttgctgagag acctaaactg caaccctaac aacaaagcca gatagaaat 1380
 217 aagccataat tgaagagcac ggctcagcag aaagtgcctc ttagaatact acagagagga 1440
 218 agagcctgca tgcgtggc ccaaggctgg accctgaagc tgatggacc acctaatact 1500
 219 ggtgctgagc tcctagtcac agcaggtgg cctcggtctc atcagagcat gccaatctaa 1560
 220 gcccattgga catagtagac tggttttgt tggctatg acatataat atatatataa 1620
 221 aatgaacata gttcatgctt tcagataaaa tgagtagatg tatattttaga ttaattttt 1680
 222 tagtcagaac ttcatgaaat ccacaccaaa ggaaaggtaa actgaaattt cccttggaca 1740
 223 tatgtgaaat cttttgtct ttatagtgaa acaaagccag agcatcttg tatattgcaa 1800
 224 tatactgaa aaaaatgaat gtatTTTTT ctccaaagaa cagcatgtt cactcaatgg 1860
 225 tgaaaagggtg gaaacattt tggtaactt atgtgttctg tcttgatatac tactgacatt 1920
 226 gtctatatga ggaaaatgat tactggtcat gtcctgtga tttttgggaa agtagggtc 1980
 227 atttctccct gcctgcttg tgccaaactg catgttgcattt ctactgcattt atgaatctgg 2040
 228 tggcttactt ttaaacatac taaaaacagt aggacttggc tgaatctacc cccaggtaaa 2100
 229 ggagaatgtt gcttattttt tagcaaacta acagccttat tctcaactaa aatatcacac 2160
 230 ctgaaaaattt taatTTTTG gtgccacagt caccatgaa caaggatttgc ccactttccc 2220
 231 accaaattgt gagtgcctgt aatttaggtc tctctacctt aaattcagta taaggaaacg 2280
 232 taattatgtat tgatTTTTT caaagatgac aagctgtgtt gaaatacattt ttttttttga 2340
 233 ccaattgaca gaatctaata agctttaata atctccctt tttatgtgaa aagtttttag 2400
 234 aactgtgaaa tgTTTtagaa caaactgtt aaatccattt gaaaggaaaa aagaaagtgg 2460
 235 taccagtgtt accagctcaa ctAAAacctg caattgtgca ttcaactttt tcacttcctc 2520
 236 agcatacAAAa tagctcatta gaagacattt acgcattgtt ggtatagggca agggaaagtt 2580
 237 ttttcaaaatg acatttgcag ttctttttt cagagatgat tctatgtatag cgcctctgaa 2640
 238 agttgatgca gcattttcgc ctttccaaaaa agtattttatc ctcactgtt tttcagttac 2700
 239 ttgtatTTTC acagatggat tatctgggtt aattttcttccaa aagggagtt ttttatacac 2760
 240 agtggaaatg tattatagag tagaatagta aagctctagg ggtttcagaa agctttgatg 2820
 241 aacagatgac aaacatctga aaccccccgc gcaactgttac ccagtgtta tataatgact 2880
 242 ttttatacgctt cagtgtcccc ttgaatccat acagtttctt aaaagacaat aaaaatctt 2940
 243 taataaaatgtt aatgttaactt ctaagttcttta gaaaatgctt atctgttctg cccattca 3000
 244 ttggggggctta ctaatttgatt tggcttgcattt atttccttgc aattttcttta tttttaggag 3060
 245 gggTTTTTTC ttTTTtacggc ctgttgcattt caattactttt atgggtgttgc tgccaccgtt 3120
 246 gtagccaaagg aatctgttgg ggaagttcgaa aagaaaacctt tttctttctt ttattcattt 3180
 247 taaagtaaac ttatcctgg atgttttagaa tcaacattaa gagttatattt atgtgttca 3240
 248 gagattaaggc tgacttggat acaatattttt ctttggaaaa tgaattttctt ttttcattt 3300
 249 tgatTTTaa aaaaatgttgc accagttatg cttcatgcat cgttacatct tcatcagggtt 3360
 250 aatgttaatgt ctatTTTcattt tgcaataaaat atattgttgc 3400
 252 <210> SEQ ID NO: 6
 253 <211> LENGTH: 366
 254 <212> TYPE: PRT
 255 <213> ORGANISM: homo sapiens
 257 <400> SEQUENCE: 6
 258 Met Thr Val Arg Asn Ile Ala Ser Ile Cys Asn Met Gly Thr Asn Ala
 259 1 5 10 15
 260 Ser Ala Leu Glu Lys Asp Ile Gly Pro Glu Gln Phe Pro Ile Asn Glu
 261 20 25 30
 262 His Tyr Phe Gly Leu Val Asn Phe Gly Asn Thr Cys Tyr Cys Asn Ser
 263 35 40 45
 264 Val Leu Gln Ala Leu Tyr Phe Cys Arg Pro Phe Arg Glu Asn Val Leu
 265 50 55 60

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 03/03/2006
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

111

Seq#:24; Xaa Pos. 2,4,7,16
Seq#:30; Xaa Pos. 9,14,15,20
Seq#:40; N Pos. 1,80,254,265,275,282,290,304
Seq#:42; N Pos. 15,22,24,76,77,119,153,163
Seq#:43; N Pos. 11,90,138,166,185,190,200
Seq#:49; N Pos. 163,168
Seq#:62; N Pos. 602
Seq#:63; N Pos. 35
Seq#:64; N Pos. 602
Seq#:65; N Pos. 17,25,37,41,53,68,70,144

VERIFICATION SUMMARY

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L:1171 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:24
L:1172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:1254 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:30
L:1255 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
M:341 Repeated in SeqNo=30
L:1562 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0
M:341 Repeated in SeqNo=40
L:1590 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
M:341 Repeated in SeqNo=42
L:1605 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
M:341 Repeated in SeqNo=43
L:2040 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:120
L:2347 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62 after pos.:600
L:2360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63 after pos.:0
L:2389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:64 after pos.:600
L:2402 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65 after pos.:0
M:341 Repeated in SeqNo=65